Appln. No. 10/572,581

Amdt. dated October 24, 2010

Reply to Office action of June 23, 2010

## **Amendments to the Claims**:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims**:

- 1. (**Currently Amended**) A cutting arrangement which is disposed on a distance of travel of a web of corrugated board that is continuously produced by a corrugating machine, the cutting arrangement comprising:
- a. a blade shaft which is mounted on a blade-shaft axis of rotation for drivable rotation and which comprises at least one circular blade thereon; and
- b. a brush roll which is disposed opposite to the blade shaft and mounted for rotation about an axis of rotation, supporting the web of corrugated board which passes between the circular blade and the brush roll when the web of corrugated board is cut by the at least one circular blade;
- c. the brush roll comprising shells which are disposed on a roll core and have a cross-sectional shape of a segment of a circle and which have
  - i. an outside and an inside, the inside faces towards the roll core;
  - ii. bristles which stand out from the outside;
  - iii. torque-transmission means for transmitting torque from the roll core to the shells; and
    - iv. fastening means for fixing the shells to the roll core;

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- d. wherein threaded holes are <u>radially</u> provided in the roll core and on the inside of the shells, respectively accommodating a fastening pin for non-rotary connection of the <u>shell-shells</u> with the roll core; and
- e. wherein the fastening pin comprises two threaded portions of different pitches:
- inside the threaded hole on the shell, and a second of the threaded portions of the fastening pin fits inside the threaded hole on the roll core, and the second threaded portion of the fastening pin has a larger pitch than the pitch of the first threaded portion of the fastening pin; and
- g. wherein the second threaded portion of the fastening pin is of a larger diameter than the first threaded portion of the fastening pin.
- 2. (Withdrawn) A cutting arrangement according to claim 1, wherein the shells are half-shells.
- 3. (Withdrawn) A cutting arrangement according to claim 1, wherein the shells form a closed brush sleeve on the roll core.
- 4. (**Previously Presented**) A cutting arrangement according to claim 1, wherein annular ribs are provided on the roll core, and the annular ribs project radially at least along part of a periphery of the roll core.
- 5. (**Previously Presented**) A cutting arrangement according to claim 4, wherein ring grooves are provided on the inside of the shells, and the ring grooves with the ribs for at least one of fixing the shells axially and fixing the shells tangentially.

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6. (Cancelled)

7. (Previously Presented) A cutting arrangement according to claim 1,

wherein a first shell comprises a first fastening means and a second shell comprises a

second fastening means for connection of the first shell with the second shell on the roll

core.

8. (Withdrawn) A cutting arrangement according to claim 1, wherein in the

vicinity of the axial or tangential ends of the shells, the bunches of bristles incline

towards the respective end, in particular combining with a radius to make an angle of

b > 0°.

9. (Withdrawn) A cutting arrangement according to claim 1, wherein two

adjacent shells interengage in the way of fingers in the vicinity of their respective

tangential ends.

10. (Cancelled)

11. (Previously Presented) A shell for use in a cutting arrangement

according to claim 1 for being fixed to a roll core, the shell comprising:

a. a basic structure having a cross-sectional shape of a segment of a

circle;

b. the outside and the inside;

c. the bristles which project outwards from the outside;

d. the torque-transmission means for transmitting torque from the roll

core to the basic structure;

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- e. the fastening means for fixing the basic structure to the roll core, wherein the fastening means comprises the fastening pin comprising two threaded portions of different pitches; and
- f. receiving means comprising the hole in the roll core and a hole in the shell, the hole in the roll core has a threaded portion and the hole in the shell has a threaded portion, the threaded portions having different pitches for receiving the fastening pin.
- 12. (**Previously Presented**) A cutting arrangement according to claim 4, wherein ring grooves are provided on the inside of the shells, and the ring grooves cooperate with the ribs for fixing the shells tangentially.
- 13. (**Withdrawn**) A cutting arrangement which is disposed on a distance of travel of a web of corrugated board that is continuously produced by a corrugating machine, the cutting arrangement comprising:
- a. a blade shaft is mounted on a blade-shaft axis of rotation for drivable rotation and which comprises at least one circular blade thereon; and
- b. a brush roll which is disposed opposite to the blade shaft and mounted on a brush-roll axis of rotation for rotation, supporting the web of corrugated board which passes between the circular blade and the brush roll when the web of corrugated board is cut by the at least one circular blade;
- c. the brush roll comprising shells which are disposed on a roll core and have a cross-sectional shape of a segment of a circle and which have
  - i. an outside and an inside, the inside faces towards the roll core;

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ii. bristles which stand out from the outside;

iii. torque-transmission means for transmitting torque from the roll core

to the shells; and

iv. fastening means fixing the shells to the roll core;

d. wherein the fastening means are joining plates, each comprising

holes for receiving securing pins; and

e. wherein the joining plates are inserted in slits of each shell.

14. (Currently Amended) A cutting arrangement according to daim

4claim 16, wherein a first of the threaded portions of the fastening pin fitting inside the

threaded hole on the shell, and a second of the threaded portions of the fastening pin

fitting inside the threaded hole on the roll core, and the second threaded portion of the

fastening pin has a larger pitch than the pitch of the first threaded portion of the

fastening pin.

15. (Previously Presented) A cutting arrangement according to claim 14,

wherein the second threaded portion of the fastening pin is of a larger diameter than the

first threaded portion of the fastening pin.

16. (New) A cutting arrangement which is disposed on a distance of

travel of a web of corrugated board that is continuously produced by a corrugating

machine, the cutting arrangement comprising:

a. a blade shaft which is mounted on a blade-shaft axis of rotation for

drivable rotation and which comprises at least one circular blade thereon; and

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b. a brush roll which is disposed opposite to the blade shaft and mounted for rotation about an axis of rotation, supporting the web of corrugated board which passes between the circular blade and the brush roll when the web of corrugated board is cut by the at least one circular blade;

- c. the brush roll comprising shells which are disposed on a roll core and have a cross-sectional shape of a segment of a circle and which have
  - i. an outside and an inside, the inside faces towards the roll core;
  - ii. bristles which stand out from the outside;
  - iii. torque-transmission means for transmitting torque from the roll core to the shells; and
    - iv. fastening means for fixing the shells to the roll core;
- d. wherein threaded holes are radially provided in the roll core and on the inside of the shells, respectively accommodating a fastening pin for non-rotary connection of the shell with the roll core; and
- e. wherein the fastening pin comprises two threaded portions of different pitches.
- 17. (**New**) A cutting arrangement according to claim 1, wherein the shells are disposed adjacent to one another with gaps between each two adjacent shells, and the bristles extend outwardly at angles at least in areas adjacent to the gaps to cover the gaps between adjacent shells.
- 18. (**New**) A cutting arrangement according to claim 1, wherein the brush roll comprises a plurality of brush rolls disposed adjacent to one another on the roll core.

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19. (**New**) A cutting arrangement according to claim 18, wherein each brush roll comprises a plurality of the shells, and the brush rolls are disposed adjacent to one another with gaps between each two adjacent brush rolls, and the bristles extend outwardly at angles at least in areas adjacent to the gaps to cover the gaps between adjacent brush rolls.

20. **(New)** A cutting arrangement according to claim 16, wherein said fastening means fixes the shells directly to the roll core.